

## The Impact of a Cardiac Arrest Prevention (CAP) Bundle on Nursing Empowerment

Hillary Davault, BSN, RN, CCRN – Doctor of Nursing Practice Student, School of Nursing, Oregon Health & Science University, Portland, Oregon, USA

Vaishnavi Divya Nagarajan, MBBS – Pediatric ICU Fellow, Division of Critical Care Medicine, Oregon Health & Science University, Portland, Oregon, USA

Laura Miller-Smith, MD – Associate Professor of Pediatrics, Division of Critical Care Medicine, Oregon Health & Science University, Portland, Oregon, USA

Sandra A Banta-Wright, PhD, RN, NNP-BC – Assistant Professor, School of Nursing, Oregon Health & Science University, Portland, Oregon, USA

**Background, Significance, & Purpose:** The bedside nurse is critical in preventing cardiac arrest (CA) in post-operative cardiac patients in the pediatric intensive care unit (PICU). In addition to reducing cardiac arrest rates in PICU, this quality improvement (QI) project aimed to measure nursing perception of the implementation of a cardiac arrest prevention (CAP) bundle and their perception of understanding their patient's risk for deterioration post-implementation in an academic medical center in the Northwestern United States.

**Methods:** This QI project utilized a quantitative descriptive design which compared pre-implementation (PRE) and post-implementation (POST) surveys of the CAP bundle. Survey results were collected pre-implementation and 3-month post-implementation using a combination of 3-point and 4-point Likert scales. Questions were asked to measure nurses' perceptions on intervening before arrival of medical providers, inclusion in management plan discussions, and awareness of ECMO candidacy. IRB determination was non-human research.

**Results:** More nurses ( $n=30$ , 83%) reported "always" or "mostly always" aware of a mitigation plan for decompensation POST compared to PRE ( $n=6$ , 14%). In addition, more nurses ( $n=24$ , 67%) reported being included in plan-of-care discussions POST than PRE ( $n=12$ , 27%). Furthermore, more nurses ( $n=26$ , 70%) reported knowing their patient's ECMO candidacy POST than PRE ( $n=3$ , 7%). Overwhelmingly, nurses ( $n=35$ , 95%) reported being more prepared to care for a decompensating patient POST than PRE ( $n=37$ , 84%). In the POST survey, nurses ( $n=36$ , 97%) reported the CAP bundle helped them understand their patient's risk for decompensation better.

**Conclusion:** Implementation of the CAP bundle was successful in empowering PICU nurses to intervene with a deteriorating patient sooner. Nurses viewed the project favorably stating the CAP bundle helped them feel included in plan of care discussions and able to execute interventions faster. Additional surveys will be conducted over the next 6 months to ensure the positive impact is sustained.

**Keywords/Topics:** Pediatric Critical Care, Pediatric Cardiac Arrest, Cardiac Arrest Prevention, Nursing Empowerment